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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,051	11/07/2001	Jaehyeong Kim	13-4	5569
46368	7590	07/27/2005	EXAMINER	
CARLSON, GASKEY & OLDS, P.C.			WONG, LINDA	
400 W MAPLE RD			ART UNIT	
SUITE 350			PAPER NUMBER	
BIRMINGHAM, MI 48009			2634	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/037,051

Applicant(s)

KIM ET AL.

Examiner

Linda Wong

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-8, 10-14 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-14 is/are allowed.
- 6) ☒ Claim(s) 2-8 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Response to Arguments***

1. Applicant's arguments, see Applicant Arguments, filed 5/9/2005, with respect to the rejection(s) of claim(s) 1-20 under McCoy (US Patent No.: 6147984) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.  
However, upon further consideration, a new ground(s) of rejection is made in view of Wheatley, III et al (US Patent No.: 6741661).

***Claim Objections***

2. Examiner suggests that the applicant renumber all claims appropriately including all dependencies.
3. **Claim 16** is objected to because of the following informalities:
  - a. **Claim 16** recites a method comprising steps of "examining the characteristics of the composite signal" and "adding the threshold-correcting signal with the first window of samples". Claim 1 and the specification states a method comprising "adding the threshold-correcting signal" to the set of samples within a first window and then "examining the composite signal". It would clarify the steps and proper process of the method recited in claim 16 if the steps of "examining the composite signal" and "adding a threshold-correcting signal" to a set of samples within a first window is switched in order as organized in claim 1.
  - b. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 2-9,15-20** are rejected under 35 U.S.C. 102(e) as being unpatentable by Wheatley, III et al (US Patent No.: 6741661).
- a. **Claim 3**, Wheatley, III et al discloses searching for at least one peak above a threshold within a window (page 1, paragraph [0013], lines 2-3 and page 5, paragraph [0055]), adding a threshold-correcting signal (page 1, paragraph [0013], lines 2-5) and examining or filtering the composite signal for other peaks found due to spurious out-of-band spectrum artifacts and comprises multiple impulse response clipping to perform the same steps again. (Pages 1-2, paragraph [0013], line 6-8, page 1, paragraph [0006], and Fig. 8, labels 913,914,916,918,and 920)
  - b. **Claim 2**, Wheatley, III et al discloses finding peaks above a threshold within a window, which can be the highest peak within the window. (Pages 1-2, paragraph [0013], lines 2-3 and page 5, paragraph [0055])
  - c. **Claim 4**, Wheatley, III et al discloses searching and adjusting the peaks above a threshold for a certain number of transactions. (Fig. 8, label 913, page 1, paragraph [0013], lines 6-8 and pages 6-7, paragraph [0079], lines 10-15)
  - d. **Claim 5**, Wheatley, III et al discloses continuously searching for peaks within the first window and correcting those peaks. (Fig. 8, labels 913,914,916,918, and 920)

- e. **Claim 6**, Wheatley, III et al discloses changing the window (Fig. 8, labels 908 and 910) and repeating the process of searching, correcting and reexamining the corrected signal. (Fig. 8)
- f. **Claims 7 and 8**, Wheatley, III et al discloses continuously searching for additional peaks after correcting the signal, which were introduced by such a process (Fig. 8, labels 913,914,916,918,920) within a second window (Fig. 8, label 910) and correcting the peaks. (Fig. 8, label 920)
- g. **Claim 16** inherits all the limitations of claim 1, but claim 1 does not recite calculating a magnitude and polarity of a threshold-correcting signal for the first highest peak. Wheatley, III et al inherently discloses calculating the magnitude and polarity by generating a threshold envelope. (Fig. 7, label , and page 5, paragraph [0058], lines 3-7)
- h. **Claim 17**, Wheatley, III et al discloses researching the corrected signal within the same window and correcting a signal within that window if the peak-to-average power for the current samples is greater than the peak-to-average target power, which indicates that all the peaks within the window are below the threshold and no out-of-band signals have been found. (Fig. 8, label 914)
- i. **Claim 18** inherits all the limitations of claim 6,16, but neither claim 6 nor 16 recites the limitation of searching for a second highest peak and examining the composite signal if the second highest peak is corrected. Although Wheatley, III et al does not explicitly state searching for the second highest peak, Wheatley, III et al discloses searching for peaks above a threshold, which can

be the highest peak within that window. Also, Wheatley, III et al discloses searching and correcting the signal within the same window if the peak-to-average ratio is not less than the target value, which indicates that if the highest peak is corrected, the searching and correcting more peaks within that window will occur. (Fig. 8, labels 912,913,914,916,918, and 920)

- j. **Claim 19** inherits all the limitations of claim 7.
- k. **Claim 20** inherits all the limitations of claim 8.

#### ***Allowable Subject Matter***

- 5. **Claims 10-14** are allowed over prior art.

#### ***Conclusion***

- 6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
  - a. Long (US Patent No.: 6240141)
  - b. Yang (US Patent No.: 6504862)
  - c. Birchler, Mark A (US Patent No.: 5287387)
  - d. McGowan et al (US Patent No.: 6236864)
  - e. Birchler et al (US Patent No.: 5638403)
  - f. Hahm (US Patent No.: 6356606).


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Wong whose telephone number is 571-272-6044. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LW



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINE**  
**TECHNOLOGY CENTER 2800**